IN THE CLAIMS

Please cancel claim 16, and further amend the claims as indicated below.

1. (previously presented) A method comprising:

(a) receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device;

(b) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received measured electrical signal response between two adjacent sampling points by a respective linear curve section;

(c) for each section of the received measured electrical signal response between two adjacent sampling points:

(i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and

(ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;

(d) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and

(e) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit.

2. (previously presented) The method of claim 1, wherein the measured electrical signal response comprises a signal selected from the group consisting of:

a measured signal response to a predetermined electrical signal provided as a stimulus signal to the electronic device, and

a response to a step signal so that the measured signal response comprises a step response.

3. (previously presented) The method of claim 1, wherein the measured electrical signal response is sampled in the time domain.

4. (canceled)

5. (canceled)

6. (previously presented) The method of claim 1, further comprising:

calculating a ideal step response from a measured real step signal having a finite slew rate and from the measured electrical signal response to the measured real step signal.

7. (previously presented) The method of claim 6, wherein the ideal step response is calculated by a technique selected from the group consisting of a Fourier Transformation and a Fast Fourier Transformation.

8. (previously presented) The method of claim 1, wherein the model of the electronic device is generated by a system selected from the group consisting of a simulation system and a SPICE simulation system.

9. (previously presented) The method of claim 1, wherein the electronic device is selected from the group consisting of: a linear device, a time-invariant device, an electrical device, a signal path, a high-speed signal path, a line drive output, a line drive output of an automated test equipment, and an n-port network.

10. (previously presented) The method of claim 1, wherein the measured electrical signal response of the electronic device is a measurement selected from the group consisting of a time domain reflection measurement and a time domain transmission measurement.

11. (previously presented) The method of claim 1, further comprising:

measuring the signal response of the electronic device in at least one of the time domain and the frequency domain.

12. (canceled)

13. (previously presented) A computer readable storage media containing executable computer program instructions which when executed cause a processing system to perform a method comprising:

(a) receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device;

(b) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received measured electrical signal response between two adjacent sampling points by a respective linear curve section;

(c) for each section the received measured electrical signal response between two adjacent sampling points:

(i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and

(ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;

(d) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and

(e) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit.

14. (canceled)

15. (currently amended) A system, comprising:

(I) a receiver for receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device~~, and~~;

(II) a modeling unit for:

(a) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received signal response between two adjacent sampling points by a respective linear curve section;

(b) for each section of the received measured electrical signal response between two adjacent sampling points:

(i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and

(ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;

(c) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and

(d) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit; and

(III) a measuring unit for measuring the electrical behavior of the electronic device in at least one of the time domain or the frequency domain.

16. (canceled)

17. (canceled)